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QUANTITATIVE CONTENT ANALYSIS:
A METHODOLOGICAL HANDBOOK WITH EXAMPLES FROM RESEARCH ON THE SOVIET UNION

by
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PREFACE

Social scientists have developed a variety of systematic methods, many of them quantitative, which are now used broadly in academic research but have yet to find a place in political research conducted by the intelligence community. This is due in part to the differences in problem and purpose between policy-oriented and theory-oriented research, in part to a time lag in adapting and applying unfamiliar procedures. This study of quantitative content analysis is part of an ongoing program in the Office of Regional and Political Analysis to examine and test the applicability of such methods to intelligence research.

A previous study, "Measuring Support for Brezhnev: An Empirical Test of Some Kremlinological Assumptions," PR 76 10054, August 1976, illustrated the application of quantitative content analysis to political intelligence research. The present study deals with the methodology *per se.* Sections I and II describe what quantitative content analysis is and discuss its limitations and potential uses. They are broadly applicable regardless of one's country focus. Sections III and IV discuss some special circumstances of dealing with Soviet source materials and suggest specific applications to research on the Soviet Union. Although written in a specifically Soviet context, much of the content of these sections is broadly applicable to other geographical areas. A lengthy Appendix describes a variety of specific approaches to content analysis and will be of particular interest to analysts considering actual research applications of the technique. Technical terminology characteristic of quantitative methodology has been carefully avoided.

The author will be pleased to provide, upon request, methodological assistance to anyone in the intelligence community interested in using quantitative content analysis as a research tool.

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EXECUTIVE SUMMARY

Content analysis refers to any procedure for making inferences by systematically identifying, categorizing, and recording specified characteristics of written or spoken communications. Although quantification is not an essential element, most content analyses do in fact involve numerical measures of communications content. This report focuses specifically on these quantitative approaches.

The nature of the evidence obtained by quantitative content analysis is perhaps best understood by comparing it with the evidence obtained by other quantitative research techniques such as opinion polls, questionnaires, and certain psychological tests. The content analyst, in effect, formulates a "questionnaire." He then examines speeches, journal articles, official documents, etc., and checks the appropriate box on the questionnaire each time he finds an "answer."

Content analysis encompasses a family of related techniques adaptable to a wide variety of specialized purposes. The communications characteristics of interest to the researcher might be specific themes indicative of beliefs, attitudes, perceptions, or goals; groups of words or symbols (perhaps indicative of psychological traits); the co-occurrence of two or more words (indicative of patterns of association); or even the types of logic employed. And once the specified characteristic has been identified, the analyst may note its presence, count its frequency, measure its intensity, or, in the case of newspaper articles, assign an attention score based on amount of space, size of headline, and/or page position. The search for these textual characteristics may be undertaken either manually or by computer. The Appendix describes these different approaches to content analysis and cites examples from the study of Soviet, and to a lesser extent Chinese, speeches and journals.

Content analysis is a specialized technique applicable only to particular sorts of problems. It is essentially descriptive and helps to explain the intent of the communicator only insofar as accurate description is a *sine qua non* of accurate explanation. Like opinion polling and other measurement techniques, it is useful primarily for

making precise comparisons between individuals or groups, or between time periods. A principal limitation is the tedious and generally time-consuming nature of the work required to code and tabulate all elements of a text which fall into the specified categories of interest. This effort must be justified by significant benefits beyond those achievable by conventional analysis.

Quantitative content analysis seems especially appropriate for Communist area studies, because of the inaccessibility of Communist elites to more conventional forms of research, and because the priority accorded to Soviet and Chinese studies may justify the additional investment of time and effort. But there are problems of accessibility to political elites in all countries, and content analysis can be used to clarify analysts' judgments about leaders or groups from other geographical areas as well.

Why Choose This Method?

One impetus to engage in systematic content analysis is the need to adduce more persuasive evidence in support of analytical conclusions that are unexpected or controversial. In conventional analysis, conclusions about trends in content over time or differences in content between individuals or groups are normally supported by selecting and citing representative passages of the text. But the evidence on many points is inconsistent and contradictory, and it is often possible to cite other passages which seem to support an opposite conclusion. Quantitative content analysis is more systematic than conventional analysis, and it is potentially more objective and persuasive, in that it categorizes and tabulates *all* appearances in the text of the characteristics deemed relevant to the issue at hand.

A second reason for engaging in the more time-consuming procedures of quantitative content analysis may be the benefits of quantification *per se*. Counting of frequency or measurement of intensity transforms qualitative information into quantitative data. Quantification is normally unnecessary, but there are occasions when the increased precision is clearly beneficial. Quantification is essential if one wishes to take advantage of statistical procedures for relating a quantified variable to other numerical data, e.g., analyze the relationship between age (political generation) and a quantitative measurement of the political attitudes of Soviet elites.

Content analysis is similar to opinion polling in that it can be used to aggregate themes expressed by individuals to arrive at a quantitative description of the beliefs, attitudes, perceptions, values, or goals of a

group. Summing individual statements to infer group characteristics is by its very nature a matter of counting the frequency of expressions, for the group is defined as the sum of its individual members. Thus quantitative content analysis is well suited to measuring differences in issue orientation between groups (distinguished by age, occupation, nationality, etc.) or to measuring change in the same group from one time period to another. This aggregating or synopsizing of themes has many potential applications. Several of these, as well as other applications of quantitative content analysis, are summarized below and then discussed in greater detail in Section IV.

Elite Analysis: One may measure the extent to which diverse elite groups, such as the Soviet party *apparatchiki*, the economic managers, and the military agree or disagree on a variety of issues. Quantification of these attitudinal data then permits correlation of attitudinal information with the more readily available data on age, education, social and ethnic origin, and career background. For example, one can test hypotheses concerning the relationship between political attitudes and age. How significant are the differences between political generations in the USSR, and what are the long-range implications of these differences?

Perception Analysis: In analyzing Soviet perceptions, quantitative content analysis facilitates going beyond such generalizations as "the Soviets believe that. . . ." When all relevant statements are systematically recorded in the appropriate categories, it is easier to cope with diversity and even inconsistency of views. The quantitative results may be broken down in various ways to differentiate which individuals or groups perceive what, when, with what frequency, and how consistently.

Political Indicators: We have economic indicators to measure the state of the Soviet economy, but no comparable political indicators to measure the state of the political system. Development of such indicators to measure evolutionary change presents major conceptual and methodological challenges, but content analysis does offer promise in this field. Lodge's (1969)* work was an initial attempt in this direction. He used content analysis in an effort to chart gradual changes in the Soviet system on a scale ranging from total party domination to political pluralism.

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* This study follows the current social science procedure of including abbreviated source citations in the text. Full citations are found in a list of references at the end of the study.

THE DISCUSSION

I. WHAT IS CONTENT ANALYSIS?

Content analysis, in one sense of the term, is fundamental to most foreign policy research, as most such studies draw inferences from an analysis of the content of leaders' statements or articles in authoritative newspapers and specialized journals. The term has come to be used, however, and is used in this report, with a specialized meaning. It refers to a method of "making inferences by objectively and systematically identifying specified characteristics of messages" (Holsti, 1969, p. 14). Although academic definitions of content analysis have varied over the years, "we can call a study a content analysis if the procedures used for processing the text are well enough defined so that a second person going through the same text would sort the same passages into the same interpretive boxes" (Pool, 1970, p. x).

Content analysis is a systematic technique for noting what words and themes are used in selected speeches and documents. It makes explicit what is often left implicit in conventional modes of analysis of the same materials. It specifies what communications have been examined and precisely what characteristics of the text are considered to be indicative of what. It then notes the presence or absence, or measures the frequency and/or the intensity of these characteristics in order to make inferences about the originator of the communication or his audience. The results are usually presented in quantitative or at least graphic form to permit precise comparison of two or more measures of the same characteristic at different times or places. Quantification is not an essential element of content analysis, but most content analyses do generate numerical data and this study is concerned exclusively with that form of analysis.

Content analysis is a research tool: like any other tool, it can be used either well or badly, depending upon the imagination and skill of the craftsman.

Quantitative content analysis is normally used to make comparisons. What is compared is, of course, determined by the purposes of the individual researcher. He can measure *change* by comparing the value of the same variable, e.g., expressed attitude toward detente or toward production of consumer goods, for the same individual (or group or country) at different points in time. Or he can measure *differences* by comparing the value of the same variable for two or more individuals (or groups or countries) at the same point in time. One might wish to compare individuals (Brezhnev vs. Suslov), nationalities (Great Russians vs. Ukrainians), elite groups (party *apparatchiki* vs. technical intelligentsia), age groups (older vs. younger generations), or countries (USSR vs. Eastern Europe or the US). Or the researcher may wish to examine the *relationship* between two different variables, e.g., how do attitudes toward detente correlate with attitudes concerning the ways of achieving economic growth or with opinions about the role of the party in maintaining social discipline?

> "... if the subjects of our inquiries are so broad-minded as to speak of different roads to socialism, we should surely outdo them by insisting on different roads to sound scholarship." (Gati, 1975, p. 9)

The procedure employed in content analysis may be clarified by discussion of the following key concepts.

Source Sample: If the quantity of relevant source material is too great to be processed in its entirety, as is commonly the case, systematic sampling procedures are employed in much the same way that an opinion poll is directed to a small sample judged to be representative of the total population. Lodge (1969), for example, sampled the content of 10 Soviet journals from 1952 to 1965 in order to identify, compare, and

Psychological Assessment: A rather different usage of content analysis is for indirect psychological assessment of political leaders. Since language is a product of unconscious as well as conscious processes, there are a number of theories and content analytic procedures for relating patterns of word usage to psychological attributes. These are described primarily in the Appendix. Psycholinguistic analysis of political leaders' public statements is a new and relatively undeveloped field. The most relevant techniques require further validation, but the existing state of the art is sufficient for experimental application.

Kremlinology: Kremlinological analysis of the "esoteric communications" characteristic of public political discussion in the Soviet Union may be classified as a form of content analysis whenever the rules of evidence and inference are made explicit. The feasibility of quantitative approaches to Kremlinological analysis was illustrated by the recent CIA study on measuring support for Brezhnev (Heuer, 1976).

In sum, content analysis is an effective research tool which has a limited but nonetheless useful range of application to intelligence research.

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measure changes over time in the views of five Soviet elite groups. He picked a sample of equal size (600 paragraphs) for each of the five elites for each of eight sampled years. (600 paragraphs x 5 elites x 8 years gives a data base consisting of 24,000 paragraphs) These paragraphs were taken from the lead articles in issues of the relevant journals, and the issues from which they were drawn were spaced out to provide equal coverage of the months and days of the week during the sampled year.

Indicators: The intelligence analyst is familiar with the concept of early warning indicators. Observable actions are analyzed as indirect indicators of something which cannot be observed directly—the intention to initiate hostilities. Similarly, many political variables of research interest cannot be observed directly, so the content analyst devises indicators to observe and measure them indirectly. Jervis (1966, p. 208) refers to this as a process of translation. The quantitative researcher must "translate . . . the concepts used in traditional scholarship into terms susceptible of mathematical treatment." Thus indicators may be used by the analyst as surrogates for variables not otherwise accessible to systematic observation, with the obvious qualification that they may not be a valid measure of the full complexity of the phenomenon under investigation.

Indicators may be very simple. For example, a C.A.C.I., Inc. (1975) study of Soviet perceptions distinguished policies motivated by national interest from policies motivated by ideological interest by noting whether references were predominantly to Soviet (or American) goals and policies or to communist (or capitalist) goals and policies. Other indicators may be quite complex and entail much theoretical justification. Blackwell (1974), for example, was interested in determining which of two models of political change best describes the Soviet system—the "oligarchic petrification" model or the "institutional pluralism" model. He identified a number of indicators which he then measured in statements of obkom first secretaries.

Categories: Categories consist of one or more words, phrases, themes, or relationships that represent variables being studied by the analyst. They specify and describe those concepts, or indicators of concepts, that are considered analytically relevant. In order to analyze Soviet perceptions of US disarmament goals

and motivations, for example, the previously mentioned C.A.C.I., Inc. study identified six possible disarmament goals, e.g., general and complete disarmament, SALT, halt of nuclear testing, etc. These goals were then broken down according to whether four possible motivations do or do not apply for each goal. The possible motivations were achieve or maintain unilateral military advantage, reduce military budget or free resources for peaceful uses, promote peace and security, or strengthen detente or peaceful coexistence. Each of these possible categories was represented in a 48 (6 x 4 x 2) cell matrix, and Soviet statements about US disarmament policy were then "coded" on this matrix.*

Categories may be derived inductively from examination of the data, i.e., the data are, to the extent possible, permitted to "speak for themselves" concerning how they are best categorized. Such a procedure permits the analyst to exercise maximum care that the categories reflect the actual nature and meaning of the communication being analyzed, but it limits the researcher's control over definition of the research problem. Alternatively, categories may be derived deductively from hypotheses of particular interest to the researcher, in which case the data are sorted into pre-conceived categories as necessary to test those hypotheses. This seemingly ensures that results are relevant to the problem as defined by the analyst, but it risks imposing on the data Western concepts which may not be wholly applicable when dealing, for example, with Soviet documents. Some combination of these two approaches is usually preferable. Devising analytically significant categories is the most crucial aspect of content analysis. It is the ability to identify and define such categories that determines whether content analysis can or cannot make a meaningful contribution to research on any given question.

Coding: Coding is the process of recording those aspects of text which fall into the specified categories. The coder follows detailed instructions which define the boundaries of each analytical category. Ideally, these instructions and the categories are sufficiently clear that any two coders applying the same instructions to the same communication will arrive at identical results, although this ideal is seldom achieved in practice. The degree of correspondence between two coders is known as the measure of intercoder agreement.

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* Examples of such matrices are shown on pages 14-16.

Manifest vs. Latent Content: An analyst may work with either the manifest or the latent content of a communication. Latent content refers to underlying content which normally escapes awareness and conscious control by the originator. It is conveyed unintentionally through patterns of word usage. The analyst interested in latent content doesn't work with *what* is said, but with *how* it is said. From this he draws inferences about psychological attributes or underlying values unrelated to the manifest content. Manifest content, on the other hand, refers to the originator's intended meaning. Manifest content is not necessarily obvious; much may have to be inferred to establish the "real" meaning, either because the communicator concealed his private beliefs or because he expressed them in a manner evident only to those who comprehend the nuances of the political context in which a statement was made. The above-mentioned categories for coding disarmament goals and motivations are designed to deal with manifest content.

Inferences: Coding and then tabulating specified textual characteristics are undertaken only to provide evidence in support of inferences. There are, therefore, two steps in any content analysis. The first is the straightforward description of content, the often mechanical process of tabulating items which fall into specified categories. The second and final step is drawing inferences from this data. While the processes of description and inference are conceptually separate, they are often inextricably interwoven at the initial stage of formulating the research design, for the data base, categories, indicators, and coding procedures are all planned for the purpose of drawing useful and valid inferences.

An Example: The recent OPR study, "Measuring Support for Brezhnev: An Empirical Test of Some Kremlinological Assumptions" (Heuer, 1976), illustrates these concepts. A sample of relevant speeches was selected. This sample consisted of 16 Soviet regional leaders, with three speeches for each leader. The indicators of support for Brezhnev were nine different characteristics of the leaders' references to Brezhnev in these speeches, e.g., total frequency of references to Brezhnev, amount of personal praise of the Soviet leader, reference to him by first name and patronymic, etc. Categories embracing these indicators were defined as clearly as possible. The speeches were then coded by having a research assistant place each reference to Brezhnev into the appropriate category or categories. The frequency (or, in the case of personal praise, the intensity) of references in each category was measured, and inferences concerning a leader's relative support for Brezhnev were drawn by comparing these measures for the 16 leaders. The purpose of this study was to test the validity of these indicators which are, or might be, used by analysts of Soviet leaders' speeches. Inferences concerning the validity of the indicators were drawn by statistical correlation of these scores on the indicators with a ranking of these same 16 leaders, according to the strength of their support for Brezhnev, prepared by a panel of three CIA Soviet analysts.

II. WHY QUANTIFY CONTENT?

Quantitative content analysis is a specialized technique applicable to particular sorts of problems, not an all-purpose methodology. It seems self-evident, for example, that inferences from quantitative measurements of frequency or intensity are simply not applicable to the great majority of questions faced by the intelligence analyst. This form of content analysis is more applicable to the needs of the social scientist who seeks to document regular patterns of events and behavior, than to the needs of the intelligence analyst whose daily concern is (or appears to be) with the unique event. The intelligence analyst generally draws inferences by analyzing the logic of a single situation. He may, for example, properly recognize a single journal article dissenting from established policy as the tip of an iceberg of behind-the-scenes agitation for change, and the identification of this article as having unusual significance is not based on any quantitative measurement. It seems useful to note this and other fundamental limitations of quantitative content analysis before considering what motivations might impel one to conduct such an analysis despite these limitations.

Systematic content analysis is a method for describing the content of a large body of text in more precise terms than is possible by conventional reading and notetaking. It is only descriptive; it does not help to illuminate the context of the communication or to explain the intent except insofar as accurate description of a phenomenon is obviously the first step toward accurate explanation. As previously noted, the description of communications characteristics in numerical terms is useful primarily for making precise comparisons. It is much less likely to be useful in

examining an evolving situation to determine how people and events converge at a given time and place to produce some unique outcome.

Another limitation is that the systematic coding of documents is often tedious and time-consuming work. In other words, the mechanics of quantitative content analysis can be both boring and costly, and this has discouraged its use. When reviewing a large body of data to make comparative judgments, CIA Soviet analysts sometimes find it necessary to engage in *ad hoc* tabulation of frequency or intensity to check the validity of their own subjective impressions about the data, but they stop the systematic tabulation as soon as the impressions are confirmed, and they normally omit reference to these procedures in the final report.

Clearly, time-consuming coding should be avoided to the extent possible. In one of the basic works on content analysis, Berelson (1952, p. 132) notes that

> "content analysis should be done not as precisely as possible but rather as imprecisely as possible—that is, as roughly as the circumstances of the study will allow (in order to minimize costs relative to returns). This implies that under normal conditions careful counting should not be done unless it is quite necessary."

The burden of coding can be reduced by assigning the task to a research assistant or an outside contractor, but the relationship of costs to benefits is still an important element in evaluating whether to employ quantitative content analysis in any given study. One cannot generalize about costs, as the time required for coding depends upon the nature of the coding scheme as well as the volume of the data. In the recent study of indicators of support for Brezhnev (Heuer, 1976), the nature of the coding scheme was so simple that it was unnecessary to actually read all the speeches. A research assistant screened the speeches line by line looking only for words which signified a reference to Brezhnev or to the Central Committee and made a marginal note each time these words appeared. The author then read only the paragraphs signalled by the research assistant and tabulated the various types of references to Brezhnev. This went very rapidly once the procedures were developed and learned. It is far more common, however, for coding to be a slow process requiring careful reading and weighing of judgmental decisions. Coding of themes,

in particular, goes much slower than coding of individual words.

A further limitation of content analysis is the apparent difficulty in applying it well. Many of the content analyses reviewed for this report contain significant methodological weaknesses, and the overall quality of these studies is unimpressive. Several of the problems are discussed at other points in this report: implicit assumptions that public statements measure private attitudes, and cross-national comparisons that are invalidated by non-comparability of categories. Other weaknesses are found in the selection of samples, conceptualization of variables, and the definition of categories and indicators. The intelligence analyst who believes content analysis may offer answers to his research problem and who lacks training in quantitative methodology would be well advised to seek methodological assistance, especially to weigh the various options at the inception of his project.*

What can be said about the benefits of quantitative content analysis and the circumstances under which its costs in research time might be necessary and justified? The remainder of this section is devoted to that question.

Evidence to Support Controversial Conclusions

The impetus to engage in the more time-consuming quantitative procedures may originate with recognition that the normal procedure of supporting conclusions with selected quotations from a large body of text is for some purposes too subjective; when conclusions are controversial or run counter to conventional wisdom, a concerted effort to develop more objective evidence may be justified.

Selected quotations cited in support of perceived trends or attitudes are less persuasive, as evidence, than a systematic classification and tabulation of all relevant references. Selected quotations serve well to illustrate a point, but they are not necessarily accepted as conclusive evidence in support of that point. The skeptic may cite other passages which seem to indicate an opposite trend or emphasis, and, indeed, the evidence on many issues tends to be contradictory. The content analyst approaches this problem by

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*Holsti (1969) and Carney (1972) are the principal textbooks explaining how to conduct content analysis.

fitting all relevant expressions into some explicitly defined classificatory scheme. This provides a more complete and systematic description of what has been said, which in turn offers a sounder basis for interpreting the *meaning* of the data.

The previously described study of indicators of support for Brezhnev supplies a simple illustration. Prior to conducting that study a panel of Soviet analysts was asked to comment on the potential indicators. The panelists judged that two of the forms of reference to Brezhnev—use of first name and patronymic, and use of last name without the Comrade title—were probably determined by personal factors largely unrelated to the speaker's political support for Brezhnev. The empirical evidence from the study, based on coding all such references to Brezhnev and comparing this data with the panelists' own intuitive ranking of the leaders according to the strength of their support for Brezhnev, showed that these two forms of reference were actually the best indicators of the Soviet party officials' support for Brezhnev. It seems unlikely that the panelists could have been persuaded to accept this counterintuitive conclusion by another analyst's report based on more impressionistic review of the speeches with conclusions supported by several relevant examples. The explicit description of the procedures used in generating the data for this content analysis study, and the fact that all references to Brezhnev were tabulated and that this data was then correlated with other measures of support for Brezhnev, were probably essential to make a persuasive case in support of a conclusion which ran contrary to intuitive expectations.

Summarizing and Aggregating Data

Summarizing or aggregating specified elements in a body of data always involves implicit quantification. The analyst studies the data and draws conclusions expressed in terms such as more or less, increasing or decreasing. There are times when the volume of material being analyzed is so great, and/or the distinctions being made so complex or so fine, that some systematic procedure must be employed to alleviate the load on the analyst's discriminatory capabilities. It is under such circumstances that more explicit quantitative procedures may be required.

A requirement for increased precision may also prompt an analyst to turn to quantitative methods. Measurements of frequency or intensity are ways of transforming qualitative data into quantitative data, so that concepts such as greater or lesser, increasing or decreasing, possibly or probably can be expressed with some degree of numerical precision. Quantification is not an end in itself, but it can be useful under certain circumstances. In tracing a trend over time, for example, conventional analysis may be able to determine whether the observed variable is increasing or decreasing, but it seldom has the precision to measure the rate of increase or decrease, or whether that rate is accelerating or decelerating. Content analysis may provide this additional intelligence, for it offers a measurement tool that is sensitive to small changes.

But caution is always indicated when drawing inferences from quantitative data. It is pertinent, for example, to consider the fundamental question of what inferences may be drawn legitimately from measures of frequency. Frequency is, in most cases, a valid measure of preoccupation with a topic. Is it also a valid measure of importance, or concern, or intensity of feeling? Is the frequency with which Brezhnev refers to a problem or a policy position a valid measure of how important he regards that problem or policy, or how strongly he feels about it? Content analysts often do make this type of inference.

Sometimes information is so well understood that it need not be mentioned. The atomic bomb is barely mentioned in Japanese cabinet debates leading to surrender in World War II, but infrequency of mention in this instance can scarcely be equated with lack of importance. Frequency is a valid measure of importance under many circumstances, however. It

> "*Neither those who conduct these studies nor those who read them should be seduced by the existence of numbers, mathematical manipulations, and tests of statistical significance into believing that the results are automatically 'harder' and more significant than those produced by less quantitative methods. Often the apparent precision gained by quantification is more than balanced by the losses incurred in the operations which are needed to transform the data into a form which can be treated mathematically.*"(Jervis 1966, p. 205).

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has been noted, for example, that statements about group beliefs and attitudes entail implicit statements about the frequency with which these beliefs and attitudes are held by individual members of that group. Thus inferences from frequency are particularly appropriate and likely to be valid when aggregating individual expressions to form judgments about attributes of groups. Even in such cases, however, the validity of inference from frequency is not self-evident. In every instance the researcher must judge the validity of the inference, based upon his knowledge of the context and any other information which might explain frequency of observed characteristics as being due to something other than their importance. There can be no question of substituting counting for judgment; counting is only an aid to judgment, and in every case the researcher must evaluate what the numbers mean.

Statistical Analysis

Quantification may be required in order to make possible a wide variety of formal statistical procedures for calculating probabilities or the significance of a given pattern of results, and for measuring correlation between variables or the degree of influence of one variable as compared with others. This would be highly relevant, for example, in determining the impact of generational differences within the Soviet leadership. Age is already a quantitative variable, so if attitudes of a sample of leaders were quantified through content analysis it would be possible to use statistical procedures to analyze the relationship between age and attitudes and to project changes in dominant elite attitudes over time.

III. SOVIET SOURCE MATERIALS

In one sense, all available written and spoken communications represent potential source materials for content analysis. The quantity of such material is potentially unlimited, for written and oral communication is a pervasive aspect of all political activity. In practice, however, the selection of appropriate and useful source material for content analysis is constrained by the nature of the Soviet political system, the requirements of the methodology, and the purposes for which the methodology is best used.

Soviet Communications

It has been suggested that the nature of political communication in the Soviet Union precludes produc-

tive content analysis. Three points are subsumed under this argument: first, that censorship enforces a dull uniformity, so that public statements are not a fruitful area to search for differing opinions; second, that when political debate is conducted through indirect attack, obscure historical allusions, and by the omission of any reference at all, reality is too complex to be pigeonholed in the necessarily simplified categories of the content analyst; and third, that Soviet media content and official statements cannot be taken at face value in any event, so inferences drawn from content analysis are inevitably of questionable validity.

That Soviet media differ greatly from Western media is beyond dispute, but it does not follow that effective content analysis is precluded. On the contrary, there are marked advantages to working with Soviet as compared with Western media. The Soviet press is linked directly to policy-makers; its content reflects the views of policy-makers, whereas Western media normally reflect the opinion of those nongovernmental elites who seek to influence the policy process. And discussion of political topics in the Soviet Union is so highly structured that consistent patterns of relatively small differences are likely to be more significant in Soviet communications than patterns of considerably larger differences in Western communications. Because the changes or differences one is seeking in the pattern of Soviet communications may be so subtle or small, a systematic method of observation, such as content analysis, becomes all the more necessary to identify them successfully.

There are three forms of political debate in the Soviet Union. First, some policy questions are officially sanctioned for more or less open discussion, especially in the specialized journals. Problems of economic priorities and how best to manage the economy frequently fall into this category, and some aspects of defense policy have, occasionally, been the subject of public contention. A second form of debate is carried out through discussion of how policies are implemented. Even when a policy is decreed as accepted by unanimous consent, so that direct challenge to the policy is not permissible, *implementation* of that policy is fair game for discussion. Most political commentary in the Soviet Union is aimed at mobilizing support for, improving efficiency in carrying out, or criticizing shortcomings in the implementation of approved policies. Discussion takes place

within a context of ostensibly full support for established policy, but divergent emphases re implementation in fact express divergent policy orientations. A third form in which dissenting views are expressed is the "esoteric communication" studied by Kremlinologists—the new twist in a traditional ideological formulation, omission of reference to a leader, etc. Content analysis is a potentially fruitful tool for examining all three forms of political debate.

The extent to which one can take at face value what a Soviet (or any other) official says or writes is, of course, another question. But the problem of the content analyst is little different from that of the conventional analyst. For better or worse, both are obliged to depend upon published sources, and both must take great care to justify inferences drawn from such material.

Specific Sources

A cardinal rule of content analysis which is not easy to observe in practice is that like must be compared with like. Statements by individuals may be compared reliably only if the situational stimuli which prompted those statements are roughly comparable with respect to such variables as time and audience.* One can control the influence of many contextual variables in either of two ways: first, compare only speeches given in an identical context, such as speeches given to a CPSU Party Congress; or second, use a representative sample with enough speeches for each individual that differences due to different contexts cancel each other out.

There are several events in the political life of the Soviet Union which regularly prompt many leaders to make public statements at approximately the same time under more or less identical circumstances. These include the central and regional Party Congresses, Central Committee Plenums, elections to the Supreme

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* This problem of comparability is one element that distinguishes content analysis from survey research. The similarity between content analysis categories and questions on an opinion poll has already been noted. The difference is that answers to a questionnaire are always comparable, as they are responses to structured stimuli administered under controlled and uniform circumstances. The stimuli which prompt communications coded by the content analyst are neither controlled nor uniform, and they are not necessarily comparable. Comparability must be achieved by careful attention to research design, especially selection of the data base and formulation of categories. See Mitchell (1967) for further discussion of this point.

Soviet, the anniversary of the October Revolution, and Red Army Day. Comparability, and hence validity of conclusion, is best served if the statements selected to represent the views of individuals or groups of individuals to be compared with each other are drawn, to the maximum extent possible, from statements made in response to such comparable stimuli.

The content of journals is another common source of text for content analysis. When a journal is formally affiliated with a recognized group, it may be regarded as the vehicle for expression of the views of that group. Thus *Pravda* officially expresses the views of the Party, while *Izvestia* reflects governmental policy. The analyst may wish to generalize from views expressed in a journal to views of the parent group. But analyzing specialized journals on the assumption that they represent the views of specialized sub-elites poses certain methodological problems. Lodge (1969) analyzed specialist journals as indicators of the attitudes of five elite groups, e.g., *Voprosy ekonomiki* and *Ekonomicheskaya gazeta* to represent the economic elite, but this has been criticized (Horelick, Johnson and Steinbruner, 1973, p. 63) on grounds that whether or not specialist journals are indeed representative of identifiable "groups" is properly a research issue rather than an appropriate assumption for a study of interest groups. As noted by Welsh (1973, p. 26), the problem concerns the proper conceptualization of an elite. Is an elite best defined in terms of its performance of specified functions or its affiliation with an institution? For the military elite, the functional and institutional definitions encompass the same body of individuals. But what is an economic elite? Lodge conceptualized it functionally, then measured it via the output of two institutions (journals) which do not necessarily represent the broad spectrum of those who perform economic functions.

It is preferable under some circumstances to define groups in terms of identified individuals who play key functional roles, rather than in terms of a specialized journal. A sample of statements by these individuals would serve to measure intra-group cohesion as well as differences with other groups.

IV. APPLICATION TO RESEARCH ON THE USSR

Taking into account the particular costs and benefits of quantitative content analysis, plus the type

of data known to be available, it is possible to identify several general subject areas or types of studies for which such analysis seems to offer the greatest potential for making a valuable contribution. These are described below. It is certainly not intended to limit potential applications to these fields, but only to suggest that these are areas in which useful applications might be found.

Perception Analysis

The Vietnam experience made American policy-makers more sensitive to the importance of perceptions in decision-making. People—and states—act on the basis of what they believe to be true, quite independent of what may appear to others to be the objective facts of a situation. To understand and predict the actions of a foreign leader (or state), one must know how that leader defines the situation in which he finds himself. One must understand that leader's perceptions of the international system, and of the position of his own state and its potential adversaries in that system. Penetrating the minds of foreign leaders is as difficult as it is important. In the absence of interviews, questionnaires and opinion polls, which are out of the question in the Soviet Union, content analysis has been suggested as a means for measuring perceptions.

A particular advantage of quantitative content analysis in perception analysis is that it facilitates going beyond such generalizations as "the Soviets believe that . . . ." There is, of course, no such thing as a "Soviet" perception. Aggregation at the national level is often desirable, but it does obscure the fact that different Soviet leaders perceive different things at different times, and that there is even ambivalence and inconsistency in the perceptions of any single leader. Content analysis provides procedures for aggregating data in a way which retains this diversity, so that one may analyze who perceives what, when, with what frequency and how consistently.

Of course, neither the content analyst nor the analyst using conventional techniques is dealing with actual perceptions. He is dealing with public statements and media content which may reflect either true perceptions and beliefs or what the speaker or writer wants the target audience to believe. Content analysis is only a descriptive technique. It does not explain *why* something has been said or written,

although the more precise description of *what* has been said is hopefully useful to the analyst who must explain the full meaning and significance of the data.

Quantitative content analysis of perceptions must proceed as a two-stage process. The first stage is limited to describing perceptions as expressed in written or spoken communications. The second stage draws inferences concerning to what degree, in what respect, and under what circumstances the communications content reflects actual perceptions rather than communications strategies. These inferences are qualitative judgments made by the area specialist. In other words, quantitative content analysis provides the raw material for subsequent qualitative evaluation of perceptions. Such qualitative judgment is required for each individual conclusion drawn from the quantitative data.*

If this limitation is observed, quantitative content analysis can, for example, help to define how the Soviet Union perceives and evaluates the US both as an adversary in political competition and as a partner in arms control negotiations and economic relations, and it can help to measure changes in these perceptions over time.

Elite Analysis

Interest in political elites has been stimulated by recognition that national decision-making is often the product of bargaining and compromise among diverse interest groups and bureaucratic organizations with competing and contradictory goals, rather than the result of a rational process by a single decision-maker. In order to understand the dynamics of decision-making, one must know the strengths and the positions of the elite groups which influence the decision-making process. Content analysis is more precise than traditional analysis as a method to aggregate data pertaining to beliefs and attitudes of

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* It is insufficient to start with a general caveat re possible validity problems in drawing inferences about attitudes and perceptions from public statements, and then to proceed with analysis as though, once given, the warning could be ignored. Both Singer (1964) and C.A.C.I. (1975) fall prey to this temptation. The descriptive aspect of their studies is not at issue here; but the implication that the coded statements represent generally valid expressions of true attitudes and perceptions is questionable. The C.A.C.I. study, for example, claims in its title to be a study of perceptions, but it is in fact simply a description of public statements. Neither author deals explicitly with the second stage of analysis referred to above.

elite groups, so that one may measure the extent to which different groups agree or disagree on a variety of issues.

Quantification of attitudinal data also makes it possible to correlate attitudinal data with the more readily obtainable data on age, education, social and ethnic origin, and career background. One can test many hypotheses regarding the relationship between political attitudes and age. How significant are the differences between political generations in the USSR? On what points are the differences greatest? Are these differences increasing? Do younger leaders rank their political values differently than their elders, and if so what are the long-range political implications of this fact?

Key topics on which age, career or nationality groups might be expected to hold somewhat differing attitudes include detente, budgetary priorities, means for improving productivity and efficiency of the economy, policy toward intellectual and national dissent, and the role of the party. Explanation or prediction of Soviet decision-making in these fields requires knowledge of the diverse policy inputs by such interest groups as the central party organizations, regional party *apparatchiki*, economic managers, the scientific establishment, and the military, and knowledge of trends of attitude change within these groups would be very useful for long-range forecasting.*

The problems inherent in drawing inferences from media content are less serious for elite analysis than for perception analysis. Since interest focuses on identifying differences between elites, it is for some purposes, and to some degree, sufficient to demonstrate that different elites have different communications strategies; it may not be necessary to show that media content reflects "true" attitudes.

Political Indicators

There is a highly developed set of economic indicators to measure the state of the Soviet economy, but no comparable set of indicators to measure the state of the Soviet political system.** Yet monitoring

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* A Soviet elite analysis project is currently underway in CIA. It will eventually include content analysis to measure elite attitudes and then correlation of attitudinal data with background and career variables. Welsh (1969 and 1973) has also recommended use of content analysis for the study of Communist political elites.

** The concept of political indicators as described here is borrowed from the recent literature on social indicators. The seminal work in the developing field of indicators to measure the state of a society is Bauer (1966).

fundamental political trends is as important as monitoring economic trends. Analysis of fundamental change in the Soviet political system presents major conceptual and methodological challenges. It is necessary to determine which aspects of the political system are to be recognized as indicators of the fundamental state of the system and then to devise methods to measure change in these indicators.

Content analysis is a promising method for measuring political indicators. Some measure of the extent to which identifiable interest groups articulate distinctive policy positions would surely be an appropriate part of any program for measurement of political indicators. Other indicators might deal with the impact of ideology, attitudes toward dissent, attention paid to consumer interests, or the amount of expressed or perceived hostility vis-a-vis the foreign environment. There is no dearth of candidates for the role of key indicators of the state of the political system, but discussion of specific indicators and how they might be measured is beyond the scope of this study. It suffices here to point out the need for such indicators and to observe that content analysis is a workable tool for measuring some of them.

The strength of conventional analysis is recognition of anomalies in the flow of official statements and publications, anomalies that indicate new policy formulations or small but significant differences in the way the same policy is formulated by different leaders. The strength of content analysis is in measuring changes in the background against which daily events are observed. It can measure slow change over time in factors which are sometimes regarded as constants rather than variables in the Soviet system. When change is very gradual and the volume of relevant, primary source material so enormous, trends may easily be overlooked or misinterpreted. Gradual evolution in the political system is best identified and measured by applying explicit criteria to a systematically selected sample of the data.

Analysis of "Esoteric Communications"

The Soviet system places a premium on public unanimity, but this is at best a surface harmony. The ways in which divergent opinions are expressed are radically different than in the West, but they *are* expressed.

"Since partisan statements on contentious subjects cannot be made explicitly, they take the form of esoteric communications—texts whose deepest meanings can be grasped by only a part of their audience" (Rush, 1958, p. 89).

Kremlinologists utilize a variety of techniques to analyze esoteric communications and, when the data and rules for making inferences from the data are specified, these techniques fall within the general definition of systematic content analysis. In most cases, however, these techniques are not quantitative and, therefore, not within the purview of this study.

Quantitative approaches to Kremlinology are quite possible, however, as demonstrated by the recent OPR study (Heuer, 1976) on measuring support for Brezhnev. When analyzing verbal formulations which tend to be used repeatedly, such as references to Brezhnev or to key policies, one can quantify by tabulating the frequency and form of these references in a number of speeches or articles. These data may then be used as a benchmark for comparing leaders with each other or for monitoring changes in attitudes over time. Another approach to Kremlinological analysis, involving coding of what is *not* said, is discussed in the Appendix.

Psychological Assessment

Content analysis offers promise as a tool for indirect psychological assessment of political leaders, for the latent content of messages provides clues to underlying psychological characteristics of the originators of the messages. The apparent fact that psychological characteristics influence patterns of language usage is the foundation of the study of psycholinguistics. The spinoff to political psychology has been limited, as political communications obviously contain less latent content than the many less structured forms of communication of interest to the psychologist or psychoanalyst. But available research indicates that political communications do contain latent content of analytical interest. The best source of such latent content would be interviews or debates in which the leader is speaking extemporaneously, but major speeches presumed to be substantially written or heavily edited by the leader himself are also usable with some techniques.

As reviewed in the Appendix under the rubric Analysis of Word Usage, currently available techniques for exploiting latent content in political speeches or writings include methods for measuring the following characteristics: need for power, need for achievement, need for affiliation, dogmatism, cognitive complexity, belief in ability to influence one's own destiny, nationalism, use of ideological stereotypes, amount of stress being felt by a leader, and the comparative ranking of various values. A variety of hypotheses have been advanced linking these characteristics to predispositions toward various types of foreign policy behavior. But the field of indirect psychological assessment of political leaders is not well developed, and the empirical study of linkages between psychological characteristics and foreign policy behavior has just begun. Additional research is required to advance the state of the art and to validate the techniques and propositions already developed.*

The existing state of the art of indirect assessment is adequate for experimental application and merits further testing in a project to measure relevant psychological characteristics of Soviet leaders and rank them on these psychological dimensions. Analyzing leaders' speeches to the CPSU Party Congress or their Supreme Soviet election speeches would satisfy the requirement that communications being compared be taken from the same situational context. Analysis of the latent content in these speeches would tap dimensions of available data not presently reached by conventional analysis.

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* Winter and Stewart (1976) provide an extensive discussion, from an academic point of view, of content analysis as a technique for psychological assessment of political leaders.

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